

REMARKS

Claims 1 through 8 and 12 through 15 and new Claim 18 are pending in the application.

Claims 1 and 13 have been amended to delete the term “prior to shirring”. Support for this amendment can be found in the Application-as-filed.

Claim 15 has been amended to reflect expedient embodiments in which the liquid smoke includes carboxymethylcellulose additive to set the viscosity and thereby wet the liquid smoke on the inside of the casing uniformly. Support for this amendment can be found in the Application-as-filed, for example on Page 4, lines 17 through 21 and Page 4, lines 34 through 35.

Claim 18 has been added to complete the record for examination and highlight advantageous embodiments of the invention.

Claim 18 is directed to advantageous embodiments in which the food casing is single-layered. Support for Claim 18 can be found within the Application-as-filed, for example in Claim 1 as-filed.

Applicants respectfully submit that this response does not raise new issues, but merely places the above-referenced application either in condition for allowance, or alternatively, in better form for appeal. Reexamination and reconsideration of this application, withdrawal of all rejections, and formal notification of the allowability of the pending claims are earnestly solicited in light of the remarks which follow.

Section 112 Rejection

Claims 1 and 13 stand rejected over the recitation "prior to shirring." Without addressing the merits of the rejection, Claims 1 and 13 have been amended to delete the foregoing phrase. As noted above, support for this amendment can be found in the Application-as-filed. Accordingly, Applicants respectfully request withdrawal of the foregoing rejection.

*The Claimed Invention is Patentable
in Light of the Art of Record*

Claims 1 through 8 and 12 through 15 stand rejected over United States Patent Application Publication No. 2003/0059502 ("US 502") to Krallman et al. in light of United States Patent No. 5,399,427 to Stenger et al. ("US 427"); United States Patent No. 6,221,410 to Ramesh et al. ("US 410") and United States Patent No. 4,897,295 to Erk et al. ("US 295").

It may be useful to briefly consider the invention before turning to the merits of the rejection.

Smoked foodstuffs have long been known. Historically, foods have been smoked by hanging in a smoking chamber, in which the food is smoked within a cloud of smoke, such as smoke rising from burning wood and the like. This cloud of smoke imparts both a smoky taste and dark coloration to the food, and such smoky taste and dark coloration are considered esthetically pleasing to consumers of smoked foods. Applicants respectfully reiterate that food casings imparting a smoke flavor and smoke coloration, i.e. a dark coloration. to foodstuffs contained therein are highly advantageous.

Attempts have been made to smoke foodstuffs without resort to a smoking chamber, as evidenced by the primary reference, US 502, directed to smoke transport casings. Food casings based on cellulose generally take up a sufficient quantity of liquid smoke in a short period of time. But uncoated cellulose casings provide only very low barrier properties for water vapor and oxygen.

Synthetic-polymer casings exhibit improved barrier properties in comparison to uncoated cellulosic casings. Unfortunately, it is quite difficult to incorporate a sufficient amount of smoke flavoring and coloring into synthetic polymer food casings for subsequent transfer into the foodstuff. Heretofore known synthetic polymeric smoke transport casings must be stored in contact with the smoke coating in a sealed bag or the like for an extremely long period of time, such as the 5 to 10 days noted within US 502, prior to stuffing. Even with such extended soak times, heretofore known casings further contain additional excipients to mimic the effects imparted by real smoke within a smoke chamber, such as the browning agent of US 502.

Applicants have found that casing layers formed from wettable, at least moderately swellable polymers that are of sufficient thickness can absorb quite elevated amounts of liquid smoke that is used to impart a smoky flavor and dark coloration to foodstuffs, such that the heretofore known extended smoke coating soak times and browning agents are no longer required.

Applicants have more particularly found that liquid-smoke-impregnated, tubular, single-layer or multilayered food casings comprising a single-layer which is based on polyamide and/or copolyamide alone, or comprising an inner layer based on polyamide and/or copolyamide alone, in which the inside of the casing has a surface energy of greater than 35 dyn/cm that further have a swelling value of at least 10 % may readily be impregnated on the inside with liquid smoke, such that an additional browning agent is not required, as recited in Claim 1. The avoidance of browning agent was quite surprising as browning agents are well known for use in smoke formulations, as clearly evidenced by the primary reference.

In fact, the inventive casings provide such elevated absorption properties that the heretofore known liquid smoke application time of at least 5 days is not performed, as further recited in the claimed invention. Such a result was altogether unexpected by those skilled in the art, particularly in light of the absence of additional browning agent, as evidenced by both the primary reference and the Application-as-filed on Page 7, lines 19 – 22.

In especially advantageous embodiments, the inventive food casings incorporate polyamide and/or copolyamide alone as a sole or inner layer having a surface energy of greater than 35 dyn/cm and either a single-layered thickness of 50 to 130 μm or a polyamide inner layer thickness of 15 to 27 μm in which the casing or the polyamide inner layer of the casing has a swelling value of at least 10 wt % and the foregoing properties permit the impregnation of the casing with liquid smoke in the absence of an additional browning agent and further without a liquid smoke application time of at least 5 days, as recited in Claim 13.

Applicants respectfully reiterate that the claimed invention is patentable in light of the cited references, considered either alone or in combination.

Applicants particularly respectfully reiterate that the only cited reference directed to smoke transport casings is US 502. In sharp contrast the claimed invention, US 502 expressly requires both browning agent and an at least 5 day liquid smoke application time. The secondary references, which teach or suggest absolutely nothing regarding liquid smoke transport, do not cure these deficiencies in US 502. As noted above, the ability to form smoked sausages without either a browning agent or extended liquid smoke transport time of at least 5 days prior to shirring was altogether unexpected to those skilled in the art.

Applicants thus respectfully reiterate that US 502 is directed to conventional processes of applying a mixture of liquid smoke and browning agent to an at least three layered film and allowing the liquid smoke coating to “act on (or stay in contact with)” the casing for at least 5 days. (Paras [0002] and [0013]). The coating of US 502 is formed from liquid smoke, browning agents and optional water. (Para [0026]). US 502 expressly notes the incorporation of browning

agent on numerous occasions, and provides absolutely no indication that such browning could be omitted therefrom. (Paras [0002]; [0017 – 0020]; [0027 - 0029]). In fact, US 502 indicates a minimum of 20 % browning agent within its coating mixture. (Para. [0028]). US 502 further notes that the application of its “particular mixture of liquid smoke and browning agent” results in an increased depth of smoke flavor penetration. (Para. [0027]).

US 502 expressly teaches that its liquid smoke and browning agent coating is allowed to “act on” the casing for up to 10 days prior to shirring. [Para. 0002; Para. 0021; Para. 0026 and Para. 0033]. US 502 indicates that the smoke-emulsion coated casing is stored in a bag during this time, to allow the smoke emulsion to at least partially penetrate the casing. [Para. 0033]. US 502 indicates that its smoke transport casings swell from 5 to 8 % after treatment with the liquid smoke/browning agent mixture. [Para. 0030]. US 502 is silent as to the surface energy of its films.

Applicants respectfully reiterate that US 502, considered as a whole, does not teach or suggest the recited liquid-smoke-impregnated food casing in which the casing is impregnated with liquid smoke, but not with an additional browning agent. Applicants respectfully reiterate that US 502, considered as a whole, requires a browning agent and thus teaches away from the claimed invention.

Applicants further respectfully submit that the outstanding Office Action’s urging on Page 10, Ref. No. 31 that there would have been numerous motivations for one skilled in the art to delete the required browning agent of US 502 is merely a conclusory statement. In that regard, the Examiner has not provided the purported teachings of the art that browning agents are not required within smoke transport films that are not separately smoked and one of ordinary skill in the art would not have omitted the browning agent. Applicants are preparing an affidavit under 37 CFR § 132 describing the regular use of browning agents by those skilled in the art to impart a suitably dark, smoked color to the resulting sausage and the lack of motivation for their omission. Thus there would have been absolutely no motivation to have omitted browning agent from the coating composition of US 502, and the only teachings to the contrary are those

within the outstanding Office Action. Furthermore, it is not desired to decrease the brown color of smoked sausages that are not separately smoked, in contrast to the urgings of the outstanding Office Action on Page 5, Ref. No. 14. Instead, one of the greatest challenges of producing smoked sausages that are not separately smoked within a smoking chamber is to impart sufficiently dark coloring to the sausage.

Furthermore, Applicants respectfully reiterate that one skilled in the art would most certainly not be motivated to decrease “costs of the composition” by omitting the browning agent of US 502, as urged within the outstanding Office Action on Page 5, Ref. No. 14, as one skilled in the art would instead expect that the resulting product would require even more smoke-coating soak time than its current 5 to 10 days based upon the use of a lighter colored smoke emulsion, i.e. a smoke emulsion that does not contain browning agent, in order to impart a sufficiently dark coloration to the resulting sausage. In fact, US 502 expressly states that the application of its “particular mixture of liquid smoke and browning agent” results in an increased depth of smoke flavor penetration. Hence by US 502’s own teachings, a liquid smoke composition without browning agent would result in a decreased depth of smoke flavor penetration.

In that regard, Applicants respectfully reiterate that in addition to smoke flavor, smoked products exhibit a dark coloration. Liquid smoke does provide flavor to the sausage, as correctly noted by the Examiner. Liquid smoke only provides a moderate amount of dark coloration; however. The function of the browning agent of US 502 is to impart such dark coloration. Consequently, a smoke-emulsion lacking browning agent would have a lighter color, by definition. Hence one skilled in the art would expect that a longer soak time would be required for a smoke emulsion to impart sufficient coloration to appeal to the consumer in the absence of a browning agent, as it would be a lighter colored solution. Applicants further respectfully reiterate that a myriad of factors influence the overall cost of the final casing, and that the cost of the casing coating solution represents only a fraction of the overall cost of the casing.

A more significant component in the overall cost of a sausage casing is the time required to produce the casing. As noted above, an even longer smoke-emulsion soak time would have been expected to be required for heretofore known casings in conformance with US 502 in the absence of its browning agent, as the resulting smoke emulsion would have had less coloration. A longer smoke-emulsion soak time translates directly into an increase in overall production cost that would be expected to more than compensate for any decrease in "coating cost," as evidenced by the incorporation of browning agents within heretofore known coating solutions. US 502 further evidences the importance of minimizing processing times in its statement that "[f]or the meat-processing industry, it is of particular interest" to process casings "with high efficiency". [Para. 0009]. Applicants thus respectfully reiterate that no prima facie case exists for the recited omission of the browning agent.

Applicants further respectfully reiterate that there is no combination that can be gleaned from the secondary references that in any way teach the omission of a browning agent from smoke formulations, because none of the secondary references are directed to smoke transport casings and hence can provide no teaching. Applicants further respectfully reiterate that the Office Action is instead indulging in an impermissible hindsight analysis.

US 502 thus most certainly does not teach or suggest the inventive liquid-smoke-impregnated food casings that do not contain an additional browning agent and which further do not have a liquid smoke application time of at least 5 days, as recited in the claims as-amended. As noted above, it was altogether unexpected that the recited food casings could be produced without the heretofore known extensive liquid smoke application time, particularly in the further absence of additional browning agent. US 502 clearly teaches up to a 10 day soak time, and such extended soak times are based upon coating compositions that further contain browning agent. Hence the moderate liquid smoke application time flowing from the claimed food casing was not predictable to a person of ordinary skill in the art, and the foregoing rejection should be withdrawn. MPEP § 2143 A(3). Applicants further respectfully submit that the recitation "a time of action of the liquid smoke of at least 5 days is not performed" is a "definite" limitation regarding the amount of time that the liquid smoke interacts with the casing; in contrast to the

urgings within the outstanding Office Action of Page 11, Ref. No. 32. Specifically, the foregoing recitation clearly indicates a liquid smoke interaction duration of less than 5 days.

US 502 also does not teach or suggest inventive food casings having a surface energy of greater than 35 dyn/cm to uniformly apply the liquid smoke and a swelling value of at least 10 %, much less that such food casings which are further either a single-layered film having a thickness of up to 130 μm or a multilayered film having a polyamide inner layer with a thickness of up to 70 μm would result in liquid-smoke-impregnated food casings that do not require either an additional browning agent or a time of action of the liquid smoke of at least 5 days, as further reflected in Claim 1. US 502 merely provides a generic list of materials, including polyamides known to have inferior absorption and expressly teaches a maximum swelling value of 8 %. US 502 is also altogether silent as to both casing thickness (as correctly noted by the Examiner) and surface energy values. As will be noted in greater detail below, the cited secondary reference merely generically note surface energy elevation to improve meat adhesion and single layered UV barrier films formed from a polyolefin blend having a preferable thickness of 25 to 40 microns.

Applicants thus respectfully submit that US 502 simply cannot teach or suggest that food casings incorporating polyamide and/or copolyamide alone as either a sole or inner layer having a surface energy of at least 35 dyn/cm and either a single-layered thickness of 50 to 130 μm or a polyamide inner layer thickness of 15 to 27 μm in which the casing or the polyamide inner layer of the casing has a swelling value of at least 10 wt % would permit the impregnation of the casing with liquid smoke in the absence of an additional browning agent and further in the absence of a time of action of the liquid smoke of at least 5 days, as recited in Claim 13 as-amended.

Applicants further respectfully note that the recitation regarding smoked sausage casings that are not separately smoked is not merely an intended use, and that the foregoing recitation in combination with the claimed time of action of the liquid smoke of less than 5 days and absence of browning agent does indicate a significant compositional difference. Applicants further

respectfully submit that US 502 is suitable for use as a smoked sausage casing that is not separately smoked but only after the casing of US 502 has been soaked for up to 10 days in a smoke solution that includes browning agent. Applicants thus respectfully submit that US 502 would not be suitable for use as a smoked sausage casing that is not separately smoked in the absence of its required browning agent or 5 to 10 day soak time, in contrast to the Office Action's urgings to the contrary on Page 8, Ref. No. 24.

US 502, merely teaching liquid smoke, browning agent and optional water, further does not teach or suggest advantageous inventive food casings formed using liquid smoke that further comprises an additive to set the viscosity, much less carboxymethylcellulose additive, as recited in Claim 15 as-amended. Applicants respectfully submit that they have determined that tailoring the viscosity of the liquid smoke imparts more uniform smoke application. The secondary references, which are not directed to smoke transport films, do not cure this deficiency in US 502.

US 502 further does not teach or suggest the single layered smoked sausage casings of newly added Claim 18. As correctly indicated by the Examiner in the outstanding Office Action on Page 4, Ref. No. 8, US 502 instead teaches a minimum of three-layers for smoke transport films.

Accordingly, Applicants respectfully reiterate that the claimed invention is patentable in light of US 502, considered either alone or in combination with the remaining art of record.

As indicated above, the secondary references do not cure the deficiencies in US 502. In that regard, Applicants respectfully submit that none of the secondary references teaches or suggests smoke transport films, and that the Office Action is merely picking and choosing elements from the cited references while using the instant application as a guide.

In contrast to the recited liquid-smoke-impregnated food casings, US 427 is directed to films formed from polyolefin blends with improved UV barrier. US 427 initially discloses that

nylon is thought to provide "unsteady" stretching behavior. (Col. 2, lines 12 – 26). The impetus of US 427, considered in its entirety, is thus the formation of single-layered films from a mixture of polyamide, polyolefin and pigment. (Col. 3, lines 24 – 34). The polyolefin is present in amounts ranging from about 5 to 30%. (Col. 4, lines 59 – 61). US 427 touts that its films have a "relatively low" thickness in comparison to "conventional sausage casings made of polyamide," preferably ranging from about 25 to 40 microns. (Col. 6, lines 2 – 5). US 427 includes a Comparative Example formed from a single-layered film having a thickness ranging from 39 to 41 μm . (Col. 7, Comp. Ex. 1). US 427 is silent as to the swelling values and surface energy of its films.

Regardless of any general teachings as to water vapor permeability, Applicants respectfully reiterate that US 427 does not teach or suggest the recited liquid-smoke-impregnated food casing, much less such casings having either a single layer or inner layer formed from polyamide alone impregnated with liquid smoke but not with an additional browning agent, and most certainly not such liquid-smoke-impregnated food casings that do not require a 5 day soak time, as recited in the claims as-amended. US 427 is instead directed to improved UV barrier properties imparted by a polyolefin blend.

Accordingly, Applicants respectfully reiterate that the claimed invention is patentable in light of US 427, considered either alone or in combination with the remaining art of record.

Similar to the polyolefin blend casings of US 427, US 410 is generally directed to casings incorporating a polyamide layer disposed between outermost layers of polyolefin. (Col. 2, lines 5 – 10; Col. 3, lines 55 – 65; Col. 4, lines 35 – 36; Col. 4, lines 45 – 46; Col. 16, lines 6 – 9; and Col. 21, lines 3 – 14). The center polyamide layer of US 410 purportedly produces films that do not neck down during back-seaming. (Col. 3, lines 20 – 26; Col. 18, lines 17 – 18; Col. 18, lines 44 – 46).

In its background section, US 410 generically notes that "[i]t is known that a polar surface is needed for adhesion of a film to a meat product," and that "[a] polar film surface can

be provided by using: (a) polar resin ... and/or (b) surface modification.” (Col. 2, lines 13 – 21).

US 410 further indicates that it discovered that anhydride-containing polyolefin containing less than 1% anhydride often does not provide adequate meat adhesion. (Col. 3, lines 37 – 40). In contrast to the urgings in the outstanding Office Action on Page 14, Ref. No. 40, US 410 specifically singles out polyamide in its remark that “polymers such as polyamide can ... provide too much meat-adhesion and tend to pull meat off during unpackaging of the meat.” (Col. 3, lines 42 – 44). Hence US 410 does expressly caution that polyamide in contact with food could lead to “too much meat-adhesion.” US 410 goes on to state “[t]hus, it would be desirable to provide a casing having a film providing adequate meat adhesion to prevent purge, while being able to strip the film from the meat without meat pull-off due to too much adhesion of the film to the cooked meat product.” (Col. 3, lines 48 – 52). US 410 concludes this discussion by noting that “it has been found that adequate meat adhesion can be obtained using an anhydride-containing polyolefin having an anhydride functionality of at least 1 percent.” (Col. 3, lines 51 – 55). US 410 then emphasizes its conclusion by further stating that “[t]he first outer layer serves as an inside casing layer and comprises a first polyolefin” that includes either an acid copolymer or polyolefin containing at least 1 wt % anhydride functionality. (Col. 3, line 62 – Col. 4, line 5).

US 410 generically notes that its polyolefin food contact layers may be corona treated, especially to increase adhesion of its films to “proteinaceous material.” (Col. 5, lines 55 – 56; Col. 27, line 64 – Col. 28, line 3 and Col. 28, lines 13 – 15). US 410 indicates on multiple occasions that its interior film layer or polymer can have a surface energy of less than about 34 dyne/cm. (Col. 6, lines 20 – 26; Col. 17, lines 15 – 20; Claim 27 and Abstract). In fact, US 410 teaches that the polymer used to form the interior of its films preferably has a surface energy of less than 32 dyne/cm. (Col. 6, lines 42 – 44 and Col. 17, line 18). US 410 generically indicates that casings having a meat-adhesion layer formed from polar polymer “can be” corona treated, but the films do not “require” corona treatment. (Col. 17, line 39 – 45).

US 410 thus does not teach or suggest the claims as-amended.

Regardless of any general teaching of corona treated polyolefin, US 410 does not teach or suggest the inventive liquid-smoke-impregnated food casings formed from polyamide alone or having an inner layer formed from polyamide alone, much less such casings impregnated on the inside with liquid smoke but not with an additional browning agent, and most certainly not such liquid-smoke-impregnated food casings that are not subjected to a 5 day soak time, as recited in the claims as-amended. Applicants further respectfully submit that regardless of any generic disclosure, US 410 teaches with specificity that polyamide can provide too much meat adhesion. Hence US 410 suggests to one skilled in the art that polyamide should not be subjected to corona treatment, as such corona treatment would only increase the meat adhesion of a polymer that US 410 has already specifically cautioned as already having too great a meat adhesion. Applicants respectfully reiterate that to conclude otherwise based upon the teachings of US 410 is to indulge in an impermissible hindsight analysis.

Accordingly, Applicants respectfully reiterate that the claimed invention is patentable in light of US 410, considered either alone or in combination with the remaining art of record.

The claimed invention is likewise patentable in further light of US 295.

Applicants respectfully reiterate that US 295 is directed to sausage casings that avoid tightening lubricating agents and moisture retaining agents. (Col. 2, lines 62 – Col. 3, line 2). In contrast to the inventive smoke-containing casings, US 295 expressly states that its casings contain “no additional additives,” other than water. (Col. 5, lines 28 – 31). US 295 indicates absorption of up to 8 % water for polyhexamethylene adipamide. (Col. 5, lines 15 – 18). US 295 further indicates that storage time may be used “to ensure the even distribution of the water” within the casing walls. (Col. 6, lines 1 – 5).

Regardless of any general teachings concerning swelling values, US 295 does not teach or suggest inventive liquid-smoke-impregnated food casings, much less that casings incorporating polyamide or co-polyamide which further exhibit a surface energy of at least 35 dyn/cm may be impregnated on the inside with liquid smoke in the absence of an additional browning agent, and

most certainly not such liquid-smoke-impregnated food casings that are not subjected to a 5 day soak time, as recited in the claims as-amended.

Nor does US 295 teach or suggest that smoke transport films should further exhibit a swelling value of at least 10 % at 23 °C. US 502, the only cited reference directed to smoke transport films, instead teaches that its casings swell from 5 to 8 % by weight. US 502 thus does not “inherently” display the recited swelling values of Claims 1, 3 and 13, in contrast to the urgings within the outstanding Office Action on Page 7, Ref No. 21, as the teachings of US 295 are clearly not “necessarily” or “inevitably” present within US 502 based upon US 502’s own disclosure. US 502 further gives absolutely no indication that such modest 5 to 8 % swelling is not acceptable for smoke transport films. Hence there would have been no motivation to have increased it.

Accordingly, Applicants respectfully reiterate that the claimed invention is patentable in light of US 295, considered either alone or in combination with the remaining art of record.

Applicants respectfully reiterate that there would have been no motivation to have combined US 502, US 427, US 410 and US 295. US 502 is directed to food casings containing a mixture of liquid smoke and browning agent that further requires a 5 to 10 day smoke application time. US 427 is directed to single-layered UV-resistant food casings formed from a polyolefin blend that further have a thickness of about 25 to 40 microns. US 410 is directed to films that do not neck down during back-seaming having a polyolefin food-contact-layer. US 295 is directed to sausage casings avoiding tightening lubricating agents and moisture retaining agents containing “no additional additives.” These are also altogether different problems solved.

Applicants further respectfully reiterate that food casings suitable for one application will not automatically work in another application, as each application has its own unique requirements. Applicants additionally respectfully submit that the requirements for smoke transport casings differ substantially from non-transport casings.

However, even if one had combined US 502, US 427, US 410 and US 295 (which they did not), the claimed invention would not result.

Applicants respectfully submit that the combination of US 502, US 427, US 410 and US 295 would, at best, have resulted in a casing soaked a smoke solution containing browning agent for up to 10 days. This conclusion is based on the fact that, regardless of any teachings cobbled together from the secondary references, the primary reference requires both browning agent and a smoke solution soak time of up 10 days. In that regard, Applicants respectfully submit that the references must be considered in their entirety for all that they teach.

The combination thus fails to teach or suggest that food casings incorporating polyamide or co-polyamide alone as a sole or inside layer having a surface energy of greater than 35 dyn/cm and either single-layered thickness of 20 to 130 μm or a polyamide inner layer thickness of 15 to 70 μm in which the casing or the polyamide inner layer of the casing has a swelling value of at least 10 % would permit the impregnation of the casing with liquid smoke that does not require either an additional browning agent or a time of action of the liquid smoke of at least 5 days, as recited in Claim 1 as-amended. US 502 clearly requires both a browning agent and a 5 to 10 day smoke application time, and further teaches a maximum swelling of 8 % for smoke solutions. The secondary references, none of which are directed to smoke transport casings, simply do not cure the deficiencies in US 502. US 427 is directed to single-layered films formed from a polyolefin blend having a relatively low thickness. US 410 is similarly directed to casings having a polyolefin layer adjacent the casing stuffing. US 295 teaches absorption of 8 % water containing no additional additives within tightening-lubricant-free casings.

The combination thus can not teach or suggest that food casings incorporating polyamide and/or copolyamide alone as either a sole or inner layer having a surface energy of greater than 35 dyn/cm and either a single-layered thickness of 50 to 130 μm or a polyamide inner layer thickness of 15 to 27 μm in which the casing or the polyamide inner layer of the casing has a swelling value of at least 10 wt % would permit the impregnation of the casing with liquid smoke in the absence of both an additional browning agent and a time of action of the liquid smoke of at

least 5 days, as recited in Claim 13 as-amended. As noted above, US 502 requires both a browning agent and liquid smoke application time of up to 10 days and further indicates that a 5 to 8 % swell is sufficient for smoke transport films. US 427 is solely directed to mono-layered casings formed from a polyolefin blend having a thickness lower than 50 microns. US 410 is likewise directed to casings having a polyolefin layer adjacent the casing stuffing. As noted above, US 295 teaches absorption of 8 % water containing no additional additives within tightening-lubricant-free casings.

Nor does the combination teach or suggest advantageous inventive food casings formed using liquid smoke that further comprises a carboxymethylcellulose additive to set the viscosity and thereby wet the liquid smoke on the inside of the casing uniformly, as recited in Claim 15 as-amended. US 502 is altogether silent as to viscosity additives. The secondary references are not directed to smoke transport films and thus are likewise silent as to liquid smoke viscosity additives. The only reference to coating uniformity within the secondary references is US 295's teaching of storage time to ensure even distribution of its water. Thus none of the cited references teaches or suggest viscosity additives as a result effective variable in ensuring uniform liquid smoke wetting.

Nor does combination teach or suggest smoked sausage casings that are not separately smoked in which the food casing is single-layered, as recited in newly added Claim 18. US 502 clearly teaches a 3-layered film for smoke transport casings that are not separately smoked. The secondary references, none of which are directed to smoke transport casings, do not cure this deficiency.

Accordingly, Applicants respectfully reiterate that the claimed invention is patentable in light of US 502, US 427, US 410 and US 295 considered either alone or in any combination.

CONCLUSION

It is respectfully submitted that Applicants have made a significant and important contribution to the art, which is neither disclosed nor suggested in the art. It is believed that all of pending Claims 1, 3 through 8 and 12 through 15 and 18 are now in condition for immediate allowance. It is requested that the Examiner telephone the undersigned if any questions remain to expedite examination of this application.

It is not believed that extensions of time or fees are required, beyond those which may otherwise be provided for in documents accompanying this paper. However, in the event that additional extensions of time and/or fees are necessary to allow consideration of this paper, such extensions are hereby petitioned under 37 CFR § 1.136(a), and any fee required is hereby authorized to be charged to Deposit Account No. 50-2193.

Respectfully submitted,

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